I. Listing of Claims

1. (Previously Presented) A covering agent for forming a top slag on a steel melting bath, which melts on the melting bath and performs metallurgical work, the covering agent comprising

a granular material that has been made porous, the grains of which have a porosity of 5 to 70 volume percent; and

the granular material being calcium aluminate having a ratio of CaO to Al_2O_3 between 0.25 to 1.5;

wherein, the covering agent forms both a slag melt and as a result of the grains being made porous, a thermal insulation layer on the steel bath.

2. (Previously Presented) The covering agent as claimed in claim 1, in which the granules have a grain size of between 1 and 50 mm.

3. (Previously Presented) The covering agent as claimed in claim 1, in which the granules have a grain size of between 2 and 20 mm.

4. (Previously Presented) The covering agent as claimed in claim 1, in which the granules are made up of shaped granules or a pelletized product.

5. (Previously Presented) The covering agent as claimed in claim 1, in which the granules are a granulated foam product or an expanded, granulated product.

6. (Previously Presented) The covering agent as claimed in claim 1, wherein the granules have a porosity produced by dewatering or calcining.

7. (Previously Presented) The covering agent as claimed in claim 1, wherein the granules have a porosity produced by organic combustibles.

8. (Canceled)

9. (Previously Presented) The covering agent as claimed in claim 1, wherein the covering agent further comprises up to 15% by mass of auxiliary phases, selected as at least one from the group including MgO, $MgOSiO_2$, TiO_2, Fe_2O_3, or alkali metals.

10. (Previously Presented) The covering agent as claimed in claim 1, wherein the calcium aluminate has the following chemical analysis and ratio:

CaO/Al_2O_3 from 1.0 to 1.5.

11. (Canceled)

12. (Previously Presented) The covering agent as claimed in claim 1, wherein the granules have a porosity of from 20 to 60% by volume.

13. (Currently Amended) A process for producing a covering agent for a top slag of a metallic melt bath in a metallurgical vessel of the type used in the steel industry comprising the steps of reacting fine-particle mineral raw materials with one another at high temperatures and are suitable for the top slag are mixed and heated until they react to form a mixture, and further

a) providing at least one raw material which [[~~is~~]] can be dewatered or calcined so as to release at least one selected from the group of water vapor or gaseous products,

b) forming the mixture into a shapeable compound using a combustible binder,

c) shaping the shapeable compound to form material in granular form, and

d) heating the material in granular form such that the binder is burnt out, generating porosity in the material from 5 to 70 volume percent by ~~dehydration~~ dewatering or calcining of the raw material, and then a ceramic bond or a sintered bond is produced between the raw materials.

14. (Previously Presented) The process as claimed in claim 13, wherein milled raw materials with grain sizes of <90 µm are used.

15. (Previously Presented) The process as claimed in claim 13, wherein the binders used are one or more selected from the group including water, water glass, synthetic resins, sulfite waste liquor, phosphate compounds and calcined lime.

16. (Previously Presented) The process as claimed in claim 13 further comprising the step of using the covering agent to form a top slag melt and a thermal barrier layer on the metallic melt bath, as a monolayer coating on the metallic melt bath.

17. (Previously Presented) The process as claim in claim 13 further comprising the step of using the covering agent to form a thermal barrier layer on the metallic melt bath, as a thermal barrier agent on a metallic bath.

18. (Currently Amended) A process for producing a covering agent for a top slag of a metallic melt bath in a metallurgical vessel of the type used in the steel industry, comprising the steps of reacting fine-particle mineral raw materials which react with one another at high temperatures and are suitable for the top slag are mixed and heated until they react, and further

a) mixing the raw materials with water and one or more of the group including [[~~water,~~]] a foaming agent, an expanding agent, and a foam, so that pores are introduced into raw materials forming a mixture,

b) firing the mixture until a ceramic bond or a sintered bond is produced forming a fired product; and

c) breaking the fired product up into granular materials having the desired grain size and porosity in the range from 5 to 70 volume percent.

19. (Previously Presented) The process as claimed in claim 18, wherein the fired product is comminuted and classified.

20. (Currently Amended) The process as claimed in claim 18, wherein organic combustibles are added to the mixture in order to render it more porous.

21. (Previously Presented) The process as claimed in claim 20, wherein one or more of paper fibers, sawdust, sawing chips, wood chips and/or styropor granules are added.

22. (Previously Presented) The process as claimed in claim 18, wherein the raw materials are selected for producing calcium aluminates .

23. (Previously Presented) The process as claimed in claim 22, wherein raw materials which ensure the following chemistry and ratio in the mixture:

CaO/Al_2O_3 from 0.25 to 4

are used.

24. (Previously Presented) The process as claimed in claim 22, wherein the raw materials which ensure the following chemistry and ratio in the mixture:

CaO/Al_2O_3 from 1.0 to 1.5

are used.

25. (Previously Presented) The process as claimed in claim 18, wherein the raw materials with a fineness of <90 µm are used.

26. (Previously Presented) The process as claimed in claim 18, wherein the raw materials which contain up to 15% by mass of auxiliary phases are used.

27. (Previously Presented) The process as claimed in claim 26, wherein the auxiliary phases are one or more of the group including MgO, $MgOSiO_2$, TiO_2, and Fe_2O_3 and/or alkali metals.

28. (Previously Presented) The process as claimed in claim 18, wherein the firing step is carried out at temperatures of up to 1250°C.

29. (Previously Presented) The process as claimed in claim 18, wherein dewatering or calcining raw materials are used.

30. (Previously Presented) The process as claimed in claim 18 further comprising the step of using the covering agent to form a top slag melt and a thermal barrier layer on the metallic melt bath, as a monolayer coating on the metal metallic bath.

31. (Previously Presented) The process as claimed in Claim 18 further comprising the step of using the covering agent to form a thermal barrier layer on the metallic melt bath, as a thermal barrier agent on the metallic melt bath .